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EXAMINER

LU, ZHIYU

ART UNIT	PAPER NUMBER
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2618

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/606,178	Applicant(s) TOM, ALFRED	
	Examiner Zhiyu Lu	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 17-31, 34, 36 and 39-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 17-31, 34, 36 and 39-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/18/2007 has been entered.

Response to Arguments

2. Applicant's arguments filed 04/18/2007 have been fully considered but they are not persuasive.

Regarding claim 1, though "automatically respond" has been amended for distinction as argued in REMARKS, the claim language does not specify when this automatic response is reacted after. Thus, it can be interpreted as part of regular automatic response from CPU to the cartridge while selected application with the cartridge is being used.

Regarding amended claim 4, Thompson still anticipates the claim, wherein the amended claim language can be interpreted as the shell starts using other protocols instead of its own. So, it's considered as having different behavior by the shell.

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3. Applicant's arguments with respect to claims 6-11, 31, 36 and 39-40 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 34 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 34 is depending from claim 32, which was cancelled. Thus, it makes claim 34 indefinite.

The Examiner has tried to contact the Applicant by leaving messages to the Applicant's attorney on 6/14/07 and 6/19/07. Without response from the Applicant, the Examiner is taking the assumption of claim 34 depends on claim 31 for examination purpose.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 6 and 41-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Thompson (US Patent#5465401).

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Regarding claim 1, Thompson anticipates a modular wireless device comprising:

a shell (50 of Fig. 2) that contains non-wireless components, at least one of which is system software (84 of Fig 7, column 10 lines 23-25);

a cartridge (100 of Fig. 2) that contains wireless components, at least one of which comes from a set of baseband and RF hardware (Fig. 10);

an interface that enables communication between the shell and cartridge (column 9 lines 21-26);

a means for the shell to receive configuration information over the interface or for the cartridge to receive configuration information over the interface (64 of Fig. 7; column 9 lines 37-39); and

a mechanism (80 of Fig. 7 or 280 of Fig. 8) that enables the shell to automatically respond (inherent) to configuration information received over the interface or the cartridge to automatically respond to configuration information received over the interface (column 16 lines 55-66); and

a means for the modular wireless device to configure its operation based on said information (80 of Fig. 7).

Regarding claim 2, Thompson anticipates the limitation of claim 1.

Thompson anticipates the cartridge is removably connected to the shell (Fig. 5).

Regarding claim 3, Thompson anticipates the limitation of claim 1.

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Thompson anticipates the shell contains at least one button (60a of Fig. 7), a display (60 of Fig. 7), and a microprocessor (80 of Fig. 7) and the cartridge contains protocol-stack software (184 of Fig. 7).

Regarding claim 4, Thompson anticipates the limitation of claim 2.

Thompson anticipates the cartridge further includes replacement software; and the modular wireless device further includes means for transferring the replacement software to the shell; and the shell further includes means to upgrade, augment, or replace the system software using the replacement software, thereby modifying the shell to have different behavior (column 4 lines 7-23, column 7 lines 60-67, column 16 lines 22-35).

Regarding claim 6, Thompson anticipates the limitation of claim 4.

Thompson anticipates the system software is associated with a first network operator and contains a first identification number the uniquely identifies the first network operator; the replacement software contains a second network operator identification number that may be the same or different than the first identification number; and wherein the cartridge and shell exchange the first and second network operator identifications to determine whether the system software should be replaced (column 16 lines 22-35, where inherits network operator identification number in software radio to different networks, and so it is to determine replacement for suitable network usage).

Regarding claim 41, Thompson anticipates the limitation of claim 1.

Thompson anticipates wherein the at least one wireless component is baseband hardware (Fig. 10, column 3 line 52 to column 4 line 6).

Regarding claim 42, Thompson anticipates the limitation of claim 1.

Thompson anticipates wherein the at least one wireless component is RF hardware (Fig. 10, column 3 line 52 to column 4 line 6).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson (US Patent#5465401) in view of Shin et al. (U.S. Patent#6198946).

Regarding claim 5, Thompson teaches the limitation of claim 4.

But, Thompson does not expressly disclose the system software contains a first version number; the replacement software contains a second vision number; and wherein the cartridge and shell have a means to exchange the first and second version numbers to determine whether the system software should be replaced.

Shin et al. teach the system software contains a first version number; the replacement software contains a second vision number; and wherein the wireless communication device has a means to

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exchange the first and second version numbers to determine whether the system software should be replaced (column 2 lines 56-64).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate checking software version numbers for upgrade taught by Shin et al. into the modular wireless device of Thompson, in order to distinguish whether the system is upgraded.

7. Claims 7-10 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson (US Patent#5465401) in view of Aberg (US Patent#6993362).

Regarding claim 7, Thompson teaches the limitation of claim 1.

Thompson teaches the shell further includes a software application (column 10 lines 23-25); the shell has means for the software application to communicate a request for wireless communication services to the system software (column 10 lines 23-25); the modular wireless device further includes means for the cartridge to send to the system software control information that contains the wireless communication service available to the cartridge (column 3 lines 18-51); and whereby the software application can configure its operation according to the wireless communication services available in the cartridge (column 3 lines 18-60).

But, Thompson does not expressly disclose the system software includes means to store said application request; the system software has means to notify the software application of the availability of a wireless communication service in the cartridge.

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Nonetheless, Thompson teaches resident application and application module being interacted with each other (column 10 lines 55-65), wherein it would have been obvious to one of ordinary skill in the art to recognize promoting available applications of the SIM card is commonly known in data detection in SIM card usage.

Aberg teaches mobile telephone having dynamic menu that expands and shows available options when connecting SIM card or accessory (column 2 line 55 to column 3 line 11, column 5 lines 51-61).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate promoting cartridge services taught by Aberg into the modular wireless device of Thompson, in order to provide user knowledge of accessible applications from cartridge.

Regarding claim 8, Thompson and Aberg teach the limitation of claim 7.

Aberg teaches the system software maintains in memory a list or array of wireless communication services; and the list or array describes the services the shell is able to support based on the shell's hardware characteristics (column 5 lines 51-61).

Regarding claim 9, Thompson and Aberg teach the limitation of claim 8.

Aberg teaches the system software has means for expanding the list or array to incorporate new wireless communication services (column 5 lines 51-61).

Regarding claim 10, Thompson and Aberg teach the limitation of claim 8.

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Thompson and Aberg teach the cartridge has means of sending to the shell information that contains the wireless communication services supported by the cartridge; and the shell has means of comparing this information to the list or array to determine which wireless communication services in the cartridge the shell is able to use (column 4 lines 7-23 of Thompson; column 5 lines 51-61 of Aberg).

Regarding claim 40, Thompson and Aberg teach the limitation of claim 7.

Thompson teaches wherein the cartridge includes a software-defined radio that is able to reconfigure its hardware based on different types or modes of software in the cartridge (column 3 lines 54-60, column 16 lines 22-35).

8. Claims 11-14, 19, 22 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson (US Patent#5465401) in view of Tayloe (US Patent#5987325).

Regarding claim 11, Thompson teaches the limitation of claim 2.

But, Thompson does not expressly disclose the shell further includes a first memory storage bin for storing subscriber information used by a communication network to identify the device or the user of the device; the cartridge further includes a second memory storage bin for storing subscriber information used by a communication network to identify the device or the user of the device; and the modular wireless device further includes means for subscriber information to be exchanged between the shell and cartridge.

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Tayloe teaches subscriber identification being store in SIM cartridge and also in data memory of a mobile station (column 6 lines 1-16), which would have been obvious to one of ordinary skill in the art to recognize the exchange between the mobile station and SIM cartridge when inserting another SIM cartridge.

Therefore, it would have been obvious to one of ordinary skill in the art to incorporate exchanging subscriber information between shell and cartridge taught by Tayloe into the modular wireless device of Thompson, in order to register with communication network.

Regarding claim 12, Thompson and Tayloe teach the limitation of claim 11.

Tayloe teaches wherein at least one of the memory storage bins is a SIM card (column 3 lines 33-41).

Regarding claim 13, Thompson and Tayloe teach the limitation of claim 11.

Tayloe teaches exchanging information to check which memory storage bins contains subscriber information (column 4 lines 26-28).

Regarding claim 14, Thompson and Tayloe teach the limitation of claim 11.

Tayloe teaches exchanging information to check which memory storage bins contains subscriber information (column 4 lines 26-28) and the means to determine which subscriber information to be used when both memory storage bins contains subscriber information (column 4 lines 31-38).

Regarding claim 19, Thompson and Tayloe teach the limitation of claim 11.

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Tayloe teaches exchanging information to check which memory storage bins contains subscriber information (column 4 lines 26-28), which would have been obvious to one of ordinary skill in the art to recognize Thompson's application module would use the subscriber information to communicate with a wireless network via its equipped wireless transceiver.

Regarding claim 22, Thompson and Tayloe teach the limitation of claim 12.

Tayloe teach wherein both memory storage bins are SIM cards (105 of Fig. 2); and the SIM cards include user data; and the modular wireless device includes means for synchronizing the user data in the SIM cards (column 2 line 66 to column 3 line 17, column 4 lines 26-30).

Regarding claim 36, Thompson teaches the limitation of claim 2.

But, Thompson does not expressly disclose wherein the device has a mechanism that triggers automatic exchange of control configuration information over the interface when the cartridge is inserted into the shell.

Nonetheless, it would have been obvious to one of ordinary skill in the art to recognize a SIM card reader automatically exchange information when a SIM card is inserted.

Tayloe teaches proceeding automatic information exchange when a SIM card is inserted (column 3 lines 1-16, column 4 lines 19-39).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the modular wireless device of Thompson into having automatic detection and processing as taught by Tayloe, in order to make efficiency of cartridge application.

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9. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson (US Patent#5465401) in view of Tayloe (U.S. Patent#5987325) and Suprunov (U.S. Patent#6405030).

Regarding claim 20, Thompson and Tayloe teach the limitation of claim 19.

But, Thompson and Tayloe do not expressly disclose the subscriber information contains data a wireless network needs to forward calls from a first phone number to a second phone number. Suprunov teaches a memory card obtained the data a wireless network needs to forward calls (column 4 lines 11-25).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate call-forwarding data in the memory card taught by Suprunov into the modified modular wireless device of Thompson and Tayloe, in order to provide user call-forwarding service.

Regarding claim 21, Thompson, Tayloe, and Suprunov teach the limitation of claim 20.

Suprunov teaches the data is an executable that the wireless network can execute to forward calls from a first phone number to a second phone number (column 4 lines 11-25).

10. Claims 15 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson (US Patent#5465401) in view of Tayloe (US Patent#5987325) and Vilppula et al. (US Patent#6961587).

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Regarding claim 15, Thompson and Tayloe teach the limitation of claim 11.

But, Thompson and Tayloe do not expressly disclose further including a means for notifying the user which subscriber information will be used.

Vilppula et al. teach network notifying mobile terminal selected subscriber information is available for use (column 8 lines 31-43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate notifying user subscriber information usage taught by Vilppula et al. into the modular wireless device of Thompson and Tayloe, in order to notify user specific service usage.

Regarding claim 17, Thompson and Tayloe teach the limitation of claim 11.

But, Thompson and Tayloe do not expressly disclose the first memory storage bin in the shell has means to store subscriber information related to more than one air-interface standard.

Vilppula et al. teach the first memory storage bin in the shell has means to store subscriber information related to more than one air-interface standard (column 5 lines 7-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate storing subscriber information related to more than one air-interface standard taught by Vilppula et al. into the modular wireless device of Thompson and Tayloe, in order to communicate with more than one air-interface standard.

Regarding claim 18, Thompson, Tayloe, and Vilppula et al. teach the limitation of claim 17.

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Vilppula et al. teach the subscriber information in the first memory storage bin is displayed according to the air-interface standard it corresponds to (column 7 lines 24-63).

11. Claims 23-25 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson (US Patent#5465401) in view of Vilppula et al. (US Patent#6961587).

Regarding claim 23, Thompson teaches the limitation of claim 2.

But, Thompson does not expressly disclose further including a locking mechanism in the shell that prevents the shell from accessing the wireless communication services in the cartridge; and a means for unlocking the locking mechanism.

However, Thompson teaches using personal identification numbers to access various communication networks associated with the personal communication device (column 4 lines 57-62).

Vilppula et al. teach further including a locking mechanism in the shell that prevents the shell from accessing the wireless communication services in the cartridge; and a means (PIN code) for unlocking the locking mechanism (column 7 line 64 to column 8 line 13).

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate locking mechanism taught by Vilppula et al. into the modular wireless device of Thompson, in order to lock unauthorized user from accessing the device.

Regarding claim 24, Thompson and Vilppula et al. teach the limitation of claim 23.

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Vilppula et al. teach the means for unlocking the locking mechanism consists of a user entering a pass code into the shell (column 7 line 64 to column 8 line 30).

Regarding claim 25, Thompson and Vilppula et al. teach the limitation of 23.

Vilppula et al. teach the means for unlocking the locking mechanism consists of the shell obtaining a pass code from the cartridge (column 7 line 64 to column 8 line 13).

Regarding claim 27, Thompson teaches the limitation of claim 2.

But, Thompson does not expressly disclose further including a locking mechanism in the cartridge that disables wireless communication services in the cartridge; and a means for unlocking the locking mechanism.

However, Thompson teaches using personal identification numbers to access various communication networks associated with the personal communication device (column 4 lines 57-62).

Vilppula et al. teach further including a locking mechanism in the cartridge that disables wireless communication services in the cartridge; and a means (PIN code) for unlocking the locking mechanism (column 7 line 64 to column 8 line 13).

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate locking mechanism taught by Vilppula et al. into the modular wireless device of Thompson, in order to lock unauthorized user from accessing the device.

Regarding claim 28, Thompson and Vilppula et al. teach the limitation of claim 27.

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Vilppula et al. teach the means for unlocking the locking mechanism consists of the cartridge obtaining a pass code from the shell (column 7 line 64 to column 8 line 30).

12. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson (U.S. Patent#5465401) in view of Vilppula et al. (US Patent#6961587) and Cooper (U.S. Patent#6321079).

Regarding claim 29, Thompson and Vilppula et al. teach the limitation of claim 27:

But, Thompson and Vilppula et al. do not expressly disclose the means for unlocking the locking mechanism consists of a wireless network communicating a pass code to the cartridge.

Cooper teaches the means for unlocking the locking mechanism consists of a wireless network communicating a pass code to the SIM card (abstract, column 1 line 52 to column 2 line 54).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate network operator sending pass code to unlock SIM card taught by Cooper into the modified modular wireless device of Thompson and Vilppula et al., in order to ensure the cartridge content match network service.

13. Claims 26 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson (U.S. Patent#5465401) in view of Vilppula et al. (U.S. Patent#6961587) and Tayloe (U.S. Patent#5987325).

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Regarding claims 26 and 30, Thompson and Vilppula et al. teach the limitations of claims 23 and 27.

But, Thompson and Vilppula et al. do not expressly teach the locking mechanism is automatically activated when the cartridge is removed from the shell.

Tayloe teaches the locking mechanism is automatically activated when the cartridge is removed from the shell (column 6 lines 1-6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate locking automatically when removing cartridge from the shell taught by Tayloe into the modified modular wireless device of Thompson and Vilppula et al., in order to protect subscriber identification from being misused or stolen.

14. Claims 31 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson (U.S. Patent#5465401).

Regarding claim 31, Thompson teaches the limitation of claim 2.

Thompson teaches the modular wireless device contains means for exchanging information between the shell and cartridge that contains parameters used for data communications (column 10 lines 55-65), but Thompson does not expressly disclose whereby the cartridge can obtain data communication parameters from the shell.

However, Thompson teaches uploading memory from the shell cartridge (column 10 lines 62-63) and using cartridge for data communication connection interface (column 15 line 56 to column 16 line 4), which would have been obvious to one of ordinary skill in the art to recognize various

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parameters used in data communications can be obtained by the cartridge from the shell during wireless communication between the cartridge and outside.

Regarding claim 40, Thompson teaches the limitation of claim 31.

Thompson teaches the cartridge includes a software-defined radio that is able to reconfigure its hardware based on different types or modes of software in the cartridge (column 3 lines 54-60, column 16 lines 22-35).

15. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson (U.S. Patent#5465401) in view of Butler (U.S. Patent#6687836).

Regarding claim 34, Thompson teaches the limitation of claim 31.

But, Thompson does not expressly disclose the format enables the cartridge to communicate to the shell that the communication preference value should be encrypted.

Butler teaches encrypting password typed-in on display being a common practice (column 1 lines 58-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate encrypting typed-in password taught by Butler into the modular wireless device of Thompson, in order to prevent an onlooker from seeing a user's password.

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Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zhiyu Lu whose telephone number is (571) 272-2837. The examiner can normally be reached on Weekdays: 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Zhiyu Lu
June 14, 2007


NAY MAUNG
SUPERVISORY PATENT EXAMINER